

REMARKS

Upon entry of the amendments herein, claims 1-33 remain pending in the application. Claims 9, 15 and 33 have been amended herein. Claims 9 and 33 have been amended to correct inadvertent errors introduced in Applicants' previous response. Claim 15 has been amended to insert the "longitudinal axis" language previously introduced into claims 1 and 33 and which had also been intended for claim 15.

The specification has also been amended as needed to reflect the introduction of some additional figures. The additional drawings submitted herewith and the specification amendments herein have been presented in the interest of more clearly depicting the invention as claimed, which invention is fully supported by the written description and claims as originally filed. No new matter has been introduced by any of the added or amended material. Entry of the figures and attendant specification amendments is respectfully requested.

Claims 1-4, 6, 7, 14-18, 24-27 and 32 have been rejected under 35 USC §102(b) as being anticipated by US 5,824,043 to Cottone. The Examiner refers to Figures 1, 3 and 4 in that reference and asserts that they teach the instantly claimed stent; this assessment is in error.

In the first place, it must be pointed out that the Cottone "connection elements (18)" to which the Examiner refers are

actually welds meant to "join adjacent pairs of connecting portions 17 at each end length..." [Emphasis added.] [See column 4, lines 20-38 of the cited Cottone patent.] Thus, as can clearly be seen from Figures 1, 3 and 4 cited by the Examiner, there is no second continuous helical element running along the length of the stent of the cited patent. The welds of the patented stent are meant to prevent unraveling and elongation at the ends of the stent. The welds are meant to provide greater rigidity of said ends; welds are not used along the main body of the stent, in order that the main body have greater flexibility.

Furthermore, the Cottone welds (18) are not truly "connection elements" as are recited in the instant claims. In the cited Cottone patent, the top of one undulation overlaps the bottom of an undulation in the adjacent turn and said top and bottom are merely spot-welded together. These welds are not separate connection elements such as elements 27-31 shown in Figures 2 and 13 of the instant application.

Still further, the welds of the patented stent not only are not "connection elements," but, even if they were, they do not "connect fewer than all of the undulations in adjacent turns of the first helix," as required in the instant claims. It can easily be seen in Figures 1, 3 and 4 of the cited patent that, for as far as the welds extend, every single undulation along the path of said welds is connected and, further, that only

ascending or descending (depending on which orientation one might wish to give them) arms of the undulations are connected.

Further on the subject of ascending and descending arms, the Examiner asserts that Cottone discloses that "[T]he first helix has a plurality of undulations formed by ascending and descending arms (16) connected at a junction point (17)." This is apparently meant to provide a specific basis for rejection of instant claim 2. However the "junction point" cited by the examiner is really not such at all; it is merely the apex (or the lowest point, again depending on the orientation one might choose) of the continuum that is any given undulation. This is nothing like the true "junction point" recited in instant claim 2, also described on page 10, lines 12-18 of the instant specification, and clearly illustrated in instant Figures 3 and 14 (see elements 34 and 37). The junction point(s) of the instant stent truly are such, since they are points at which ascending and descending arms of a zigzag element are joined to ascending and descending arms of a zigzag element in an adjacent turn by a connection element (see, e.g., element 38 of instant Figures 3 and 14).

The Examiner asserts that the patented stent does not have free ends. What would have been more relevant for the Examiner to note is that the patented stent, unlike the instant stent does not have squared-off ends. Again, as can be seen from

Figures 3 and 4 of the cited patent, the ends, whether or not they are free, are not at a right angle to the longitudinal axis of the stent, as they are in the instantly claimed stent.

For all of the reasons cited above, the patented stent does not come close to teaching each and every element of the instant stent; the anticipation rejection is without merit.

Furthermore, for the same reasons, the Cottone patent is so deficient that, as a primary reference in an obviousness rejection, there is no way that it, alone or in combination with other references, can be said even to suggest the instantly claimed stent.

Claims 5, 19 and 33 have been rejected under 35 USC §103(a) as being obvious over the same Cottone patent in view of US 5,843,175 to Frantzen. The Frantzen patent is cited by the Examiner as teaching a specific feature recited in the three rejected claims, namely, that there are four connection elements in each 360-degree turn of the first helix. However, Frantzen certainly does not fill in any of the above-mentioned gaps in the teaching of the Cottone patent; Frantzen, too, is silent with respect to the features of the instant stent that are missing from the cited Cottone stent. Accordingly, the combination of the Cottone and Frantzen teachings cannot be said to suggest in any way the combination of features found in the instantly claimed stent.

Claims 8, 9, 20, 21, 28 and 29 have been rejected under 35 USC §103(a) as being obvious, again over the primary Cottone reference, this time in view of International Publication WO 97/21399 of Hassan et al. In this case, Hassan is cited as teaching an increase in the amplitude of the undulations in the transition zone of the stent. Similarly to Frantzen, however, Hassan is silent with respect to all of the above-mentioned elements of the instant stent that are missing from the stent taught by Cottone. Accordingly, the Hassan reference cannot make up for the fundamental deficiencies of the Cottone reference and the combination is not a bar to patentability of the instantly claimed stent.

Finally, claims 10-13, 22, 23, 30 and 31 have been rejected under 35 USC §103 as being obvious, again over the combination of Cottone and Hassan, this time further in view of US 6,315,794 to Richter. Richter is cited as allegedly disclosing particular features recited in the rejected claims, for one, "closed circumferential elements (11,112) [sic] linked to the end of the main structure by connection elements." Richter is further said to teach that the elements can be radiopaque. Once again, whether or not Richter teaches these features, it does not in any way make up for the fundamental deficiencies, discussed above, of the Cottone and Hassan references, and the addition of

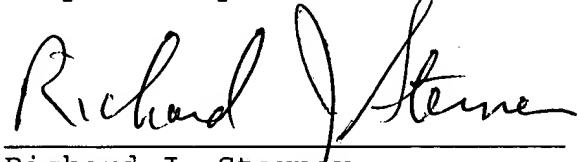
Richter to the combination of references does not provide any teaching leading to the instantly claimed stent.

As shown above, the instantly claimed stent is free of the prior art. There are no other outstanding issues, and the application is in condition for allowance. Reconsideration and allowance of the application with pending claims 1-33 are respectfully requested. Should any other matters require attention prior to allowance, it is requested that the Examiner contact the undersigned.

The Commissioner is hereby authorized to charge any fees which may be due in connection with this communication to Deposit Account No. 23-1703.

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Respectfully submitted,



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Enclosures